

Technical Specifications

SL. No	Description and Technical Specification of the item	QTY	UNIT	Delivery
1	E7018-A1H4R SMAW DIA 3.15MM/3.2MM ASME SEC.II.C, SFA-5.5 E7018-A1 H4R SMAW ELECTRODE AS PER WCPI-208A/00, Diameter - 3.15 mm/3.2 mm Length - 450 mm LONG	50,000.00	NO	90 DAYS
2	E7018-A1H4R SMAW DIA 4.00MM ASME SEC.II.C, SFA-5.5 E7018-A1 H4R SMAW ELECTRODE AS PER WCPI-208A/00, DIAMETER- 4.00 mm X 450 mm LONG	50,000.00	NO	90 DAYS
3	E7018-A1H4R SMAW DIA 5.00MM ASME SEC.II.C, SFA-5.5 E7018-A1 H4R SMAW ELECTRODE AS PER WCPI-208A/00, DIA-5.00 mm X 450 mm LONG	1,50,000.00	NO	90 DAYS



**WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI),
FOR ASME SEC.II.C, SFA-5.5 E7018-A1-H4R**

1.0 GENERAL:

- 1.1 The electrodes shall comply with requirements specified in the latest edition and addenda (applicable on the date of issue of purchase order) of ASME Sec.II.C.SFA-5.5, E7018-A1-H4R. All tests, acceptance criteria shall be in accordance with this. Additional requirements specified in this document shall also be complied.
- 1.2 The electrodes shall be supplied in quantities as specified in the purchase order.

2.0 Chemical Composition:

The chemical composition of the undiluted weld metal shall conform to ASME SECII.C SFA-5.5, E7018-A1.

3.0 MECHANICAL PROPERTIES:

The mechanical properties of the weld metal deposited using this electrode after stress relieving the test plate assembly at $620 \pm 15^\circ\text{C}$ for 300 minutes shall be as follows.

Yield strength at 0.2% offset	410 MPa (Minimum)
Tensile strength	515 MPa (Minimum)
Elongation	22% (Minimum)
Charpy V-notch Impact test at +20 °C	27 J (Minimum Impact Energy)

4.0 RADIOGRAPHIC SOUNDNESS:

The electrode shall be suitable for radiography quality butt joint welding of pressure parts of SA516 Gr.70 Plate, SA516 Gr.70 Tube and SA516 Gr.70 Pipe.

The radiographic test shall meet the requirements of ASME SECII.C SFA-5.5, E7018-A1.

5.0 SIZE:

The electrodes shall be supplied in diameters and lengths as specified in the purchase order. The tolerance on diameter and length shall be as per SFA-5.02.

6.0 CORE WIRE AND COVERING, EXPOSED CORE, IDENTIFICATION, METHOD OF MANUFACTURING

The electrodes shall meet the requirements of clause 3.2, 3.3, 3.4 of SFA-5.02 and clause 18 of SFA 5.5 for each size of electrode supplied.

7.0 FILLET WELD TEST:

Fillet weld test done using this electrode shall meet the requirements specified in ASME SEC IIC SFA 5.5, E7018-A1 for each size of electrode supplied. The electrodes shall exhibit smooth running characteristics with soft and stable arc with ease of striking. The spatter level shall be negligible. Weld bead appearance shall be smooth with fine ripples and slag shall be self-peeling.

Prepared:

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8.0 MOISTURE CONTENT OF COVERING:

Moisture content of the electrode covering shall not exceed the limit specified in ASME Sec II C, SFA 5.5 E7018-A1-H4R for each size of electrode supplied. Diffusible hydrogen content of weld metal deposited using the electrode shall be maximum 4ml/100g. Test to be done as per ASME Sec IIC, SFA 5.5 E7018-A1-H4R for each size of electrode supplied.

9.0 PACKAGING:

9.1 Electrodes in standard quantity shall be wrapped tightly in a corrugated paper with moisture proof packing in polythene bags and sealed. These shall be further packed either in hermetically sealed containers or in cardboard packets and then packed with polythene bags and sealed. The number of electrodes per packet shall be such that the net weight of each packet does not exceed 5Kg. Packets shall be further packed in cardboard cartons each weighing not more than 25kg. The cartons shall be packed in waterproof boxes with crates so as to ensure no damage during shipment and normal storage conditions.

9.2 Weight of each crate shall not exceed 1000kg.

9.3 Markings of packages shall be as per clause 4.6 of SFA-5.02.

10.0 TESTING & CERTIFICATION:

10.1 Batch /Lot classification shall be Class C1 as per SFA-5.01 filler metal procurement guidelines of ASME Sec.II.C. (Latest Edition and Addenda)

10.2 The level of testing shall be Schedule K as per SFA-5.01 filler metal procurement guidelines of ASME Sec.II.C. (latest edition and addenda)

10.3 Original test certificates in English countersigned by Manufacturer giving details of tests done in compliance with this WCPI and ASME Sec II C, SFA-5.5, E7018-A1-H4R shall be sent.

10.4 The testing authority shall certify that supplies made against the batch conform to the requirements of the latest edition & addenda (applicable on the date of issue of purchase order) of ASME Sec.II.C.SFA-5.5, E7018-A1-H4R.

10.5 The following details shall be furnished in the Test Certificate

Customer Name (BHEL Trichy)	Purchase Order Number with Date	Reporting of Results as per ASME SEC IIC and respective WCPI
Test Certificate Number	Quantity Supplied	Signature by Manufacturer
Date of Issue of Test Certificate	Size Recommended Welding Parameters	Date of Manufacturing
Applicable AWS Specifica- tion with SFA Number	Batch Number	Date of Testing
Brand Name	Certification that all results and tests are done as per ASME SEC IIC (respective SFA number) and respective WCPI number	

Sl. No.	Pre –Qualification Criteria - PR 0135008026	Bidder remark
1	<p>Bidder shall be a manufacturer of the Quoted items or an authorized dealer of the same.</p> <p>If the offer is quoted by agent, letter of authorization or agreement duly signed by the manufacturer is required to consider the offer. Tender Enquiry details must available on Letter of authorization or agreement to consider the offer.</p>	
2	Quoted Welding Consumables Brand Name/Product Name	
3	Quoted Product Catalogue	
4	Manufacturing Plant address.	
5	Manufacturer shall submit manufacturing process flow chart (Raw material to finished product) along with offer for Quoted Item.	
6	Manufacturer (Principle Supplier) shall submit a valid ISO 9001 certificate or Quality management system certificate or Written down procedure for ISO 9001 or A valid ISO 45001 certificate or Written down procedure for Quality inspection.	
7	Manufacturing Plant capacity (Principle Supplier) for SMAW Electrode.	

Seal and Sign of Authorized Person

Sl. No.	Pre –Qualification Criteria – PR 0135008026	Bidder remark
8	Bidder should give confirmation to BHEL’s Technical Specification. Any deviation from the Specification are to be mentioned in the “Bidder remark Space”. If There is no deviation vendor should indicate “No Deviation”.	
9	Shall confirm to Technical Specifications as per as per WCPI- 208A Rev.00	
10	Diameter details and Length details	
11	<p><u>For E7018-A1 H4R:</u></p> <p>Bidder (Principle Supplier) shall have successful experience for supplying of E7018-A1 H4R to any govt. Organizations/ PSUs/ Public ltd./ Company/Reputed Industries etc. Purchase orders copies/ related documents to be submitted along with offer to consider the offer.</p> <p>Note: <u>Successful experience means – supplied and accepted.</u></p>	

Seal and Sign of Authorized Person

Annexure – A- Additional Terms and Conditions for GeM Enquiry

The terms and condition mentioned in this document are applicable in addition to the GeM General Terms and Conditions. Bidders shall furnish pointwise confirmation/details.

<i>To be filled by bidder</i>		
Description of the Equipment:		
GeM Tender No. & Date		
Name of the firm (Bidder)		:
Address		:
Contact person 1		Contact person 2
Name:		Name:
Designation:		Designation:
Office Phone:		Office Phone:
Mobile:		Mobile:
e-mail:		e-mail:
Offer/Quotation reference with date		:
Sl	Terms and conditions	Vendor's confirmation
1.	Inspection by BHEL/as per Technical specification(if any).	
2.	<p>Payment terms:</p> <ol style="list-style-type: none"> 1. Payment terms for Non MSME Suppliers: Within 90 days after CRAC 2. Payment terms for Micro & Small Enterprises (MSEs): Within 45 days after CRAC. The supplier should upload UDYAM Registration Certificate in proof of MSE. 3. Payment terms for Medium Enterprises: Within 60 days after CRAC. The supplier should upload UDYAM Registration Certificate in proof of Medium Enterprises. <p>Note: Deviation in above payment terms is not acceptable. In case of Auto PRC/CRAC, Payment due date shall be calculated from CRAC date or material acceptance date by BHEL whichever is later.</p>	
3.	Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration number which should clearly mentioned in the offer. Indicate the GST registration number. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.	GST Registration No. _____
4.	Performance Bank Guarantee: Not Applicable	
5.	Kindly Indicate the HSN Code for all items	HSN CODE : _____
6.	Rate quoted in GeM portal should be on FOR destination basis inclusive of all taxes, P&F, freight etc. Transit Insurance is under Supplier scope. Please indicate how much GST percentage is included in quoted price.	GST in %: _____

Vendor's Seal & Signature

/ On Bidder's office letter pad /

Self-Declaration

Enquiry No.	
Enquiry Date	

In line with Government public procurement order Number P-45021/2/2017-B.E-II dated 15.06.2017, and further modified order dt. 28.05.2018, 29.05.2019 & order 04.06.2020 issued by DPIIT

I / We hereby declare that I / We are a "Local Supplier" meeting the requirement of minimum local content (..... %) defined in the above government notification for the goods against above mentioned enquiry Number.

Details of location at which local value addition will be made is as follows:

Door No.	
Street / Address 1	
Street / Address 2	
District	
State	
Country	
PIN Code	

We also understand that the false declarations will be in breach of the code of Integrity under rule 175(1)(i)(h) of the General financial rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

For Company Name:

Seal:

Signature:

Date:

Place:

Note:

" Local Content "means the amount of value added in India which shall ,unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured(excluding net domestic indirect taxes) minus the value of imported content in the item(including all customs duties) as a proportion of the total value, in percent. "Local Supplier "means a supplier or service provider whose product or service offered for procurement meets the minimum local content.

The above declaration shall be submitted mandatorily along with the offer in company letter head with seal & signature.

(Please fill all the yellow color field)